

# GEOKINETICS INC.

shale oil development and production

1168  
582 north vernal avenue • p.o. box ~~xxx~~ • vernal, utah 84078 • telephone (801) 789-0806

March 2, 1983

Mr. Thomas N. Tetting  
Engineering Geologist  
Division of Oil, Gas and Mining  
4241 State Office Building  
Salt Lake City, UT 84114

RECEIVED  
MAR 04 1983  
DIVISION OF  
OIL GAS & MINING

Dear Mr. Tetting:

Thank you for the Divisions' prompt response to Geokinetics' (GKI) application submittals for the proposed Seep Ridge and Wolf Den projects. As you are aware, the applications were lacking a considerable amount of information. It is GKI's intent to formulate, acquire, and develop this information for the Division prior to and following the completion of the final project designs. As yet, a date has not been set for their completion, however, GKI will keep the Division abreast of proposed project schedules.

GKI is continuing its research and development project, Experimental Site #1, with plans to ignite two-2 acre in situ retorts (#27 and #28) during 1983. These retorts were blasted in 1982 and their respective locations were provided to you in GKI's 1982 annual operations and progress report.

With the burning of two larger retorts, a substantial increase in process water production will occur and require an additional facility to safely handle the increase. To this end, GKI submitted to the Utah Department of Health an application for the construction of a 2.5 acre evaporation pond. For your review, enclosed are copies of the application, as well as the letter of approval.

Although it was not stated in the permit application, construction plans have included the removal and stockpile of topsoil mixed with vegetation (approximately 12 inches) for land rehabilitation purposes. A portion of the stockpile will be utilized during the fall of 1983 in GKI's revegetation efforts.

Preliminary plans are also being developed to investigate decomposition rates and nutrient immobilization within the stockpile. Final plans will be provided to the Division for review before initiation of the investigation.

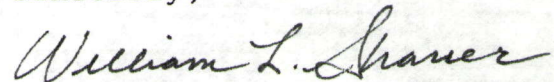


Mr. Thomas N. Tetting  
March 2, 1983  
Page 2

The topsoil stockpile will employ protection measures to limit both wind and water erosion. These measures will include (depending upon the specific control requirements of the decomposition and nutrient investigation) the use of temporary seed mixes as cover crops, or the use of soil binders, as well as surface runoff and sediment control. Final stockpile protection plans will be submitted to the Division.

Should you have any questions, comments, suggestions, etc., in regard to the above information, please feel free to call me at 328-9955.

Sincerely,

A handwritten signature in cursive script that reads "William L. Sharrer".

William L. Sharrer  
Environmental Engineer

WLS/ks

Enclosures



Scott M. Matheson  
Governor



James O. Mason, M.D., Dr.P.H.  
Executive Director,  
Department of Health  
801-533-6111

Marv H. Maxell, Ph.D.,  
Acting Director,  
Division of Environmental Health  
(801) 533-6121

MEMBERS

Grant K. Borg, Chairman  
W. Lynn Cottrell  
Harold B. Lamb  
Marv H. Maxell, Ph.D.  
Noel T. Robins  
Gerald L. Sermersheim  
Joseph A. Urbanik  
C. Arthur Zeldin  
Mrs. Lloyd G. Bliss

STATE OF UTAH  
DEPARTMENT OF HEALTH  
OFFICE OF ENVIRONMENTAL HEALTH  
Utah Water Pollution Control Committee

150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

February 10, 1983  
533-6146

Calvin K. Sudweeks  
Executive Secretary  
(801) 533-6146 Rm 410

William L. Sharrer  
Environmental Engineer  
Geokinetics Inc.  
582 North Vernal Avenue  
P.O. Box 889  
Vernal, UT 84078

Re: Construction Permit  
Process Wastewater  
Evaporation pond #2

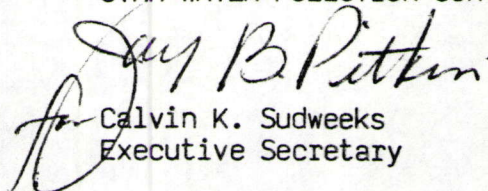
Dear Mr. Sharrer:

We have reviewed your letter of January 24, 1983. You propose to start construction of the evaporation pond at a later date than that outlined in the construction permit issued September 21, 1982.

Since the pond will be constructed according to the original design there appears to be no objection to this procedure and the construction permit is in order as originally issued.

Sincerely,

UTAH WATER POLLUTION CONTROL COMMITTEE

  
Calvin K. Sudweeks  
Executive Secretary

EHP:gb

cc: Rand Webb/Uintah Basin DHD  
1850

# GEOKINETICS INC.

shale oil development and production

1168

582 north vernal avenue

p.o. box ~~1168~~

vernal, utah 84078

telephone (801) 789-0806

January 24, 1983

Mr. Calvin K. Sudweeks  
Executive Secretary  
Utah Water Pollution Control Committee  
150 W. North Temple  
Salt Lake City, UT 84103

Dear Mr. Sudweeks:

On September 21, 1982 Geokinetics Inc. was issued a permit to construct a process wastewater evaporation pond for an increase in production at its research and development facility. The pond was designed for a period of twelve (12) months (12/1/82 - 11/30/83) with a total volume capacity of approximately 120,000 barrels. However, due to various uncontrolled circumstances, the proposed increase in production did not take place according to schedule, but rather has been delayed until April 1, 1983. A revised schedule of production depicting this change has been enclosed for your review (Figure 1).

The change will result in a net decrease in total water production (utilizing the new pond) from approximately 134,000 to 128,000 barrels. However, Geokinetics' intends to construct the pond according to the original design, thus allowing for an even greater margin of safety. Construction of the pond should commence during the latter part of February, 1983 and be completed during March, 1983.

Geokinetics respectfully submits this change in plans for your review and consideration. Should you require any additional information, please feel free to contact us at 801-646-3401.

Sincerely,

*William L. Sharrer*

William L. Sharrer  
Environmental Engineer

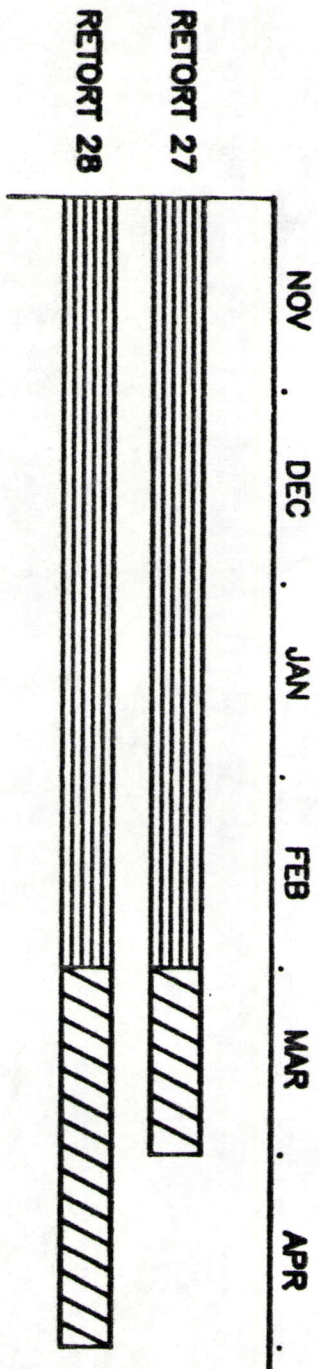
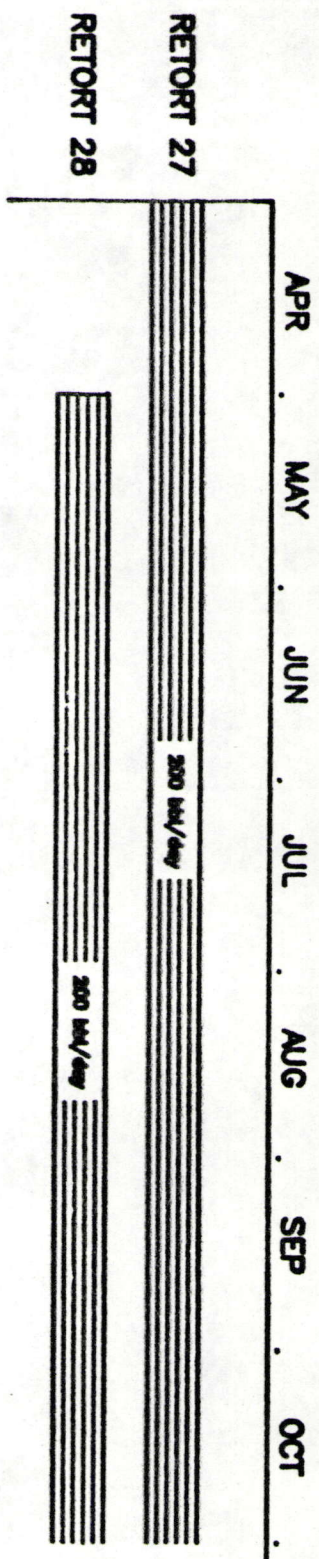
WS/ks

Enclosure

bcc: R. Lundberg ✓  
Vernal  
Kamp



FIGURE 1 -- PROPOSED PERIOD OF INCREASED WATER PRODUCTION  
( REVISED )



☒ EXISTING EVAPORATION POND ( POND # 1 )  
☐ PROPOSED EVAPORATION POND ( POND # 2 )



TABLE 1. (revised)

PROJECTED WATER PRODUCTION BETWEEN  
APRIL 1, 1983 AND APRIL 30, 1984  
(in barrels)

DATE	DAILY PRODUCTION	MONTHLY PRODUCTION
APR	200	6,000
MAY	400	12,400
JUN	400	12,000
JUL	400	12,400
AUG	400	12,400
SEP	400	12,000
OCT	400	12,400
NOV	400	12,000
DEC	400	12,400
JAN	400	12,400
FEB	400	11,600
MAR	400	12,400
APR	200	6,000
TOTAL		146,400

Production increase  
where an additional  
pond is required  
(128,000 bbls.)

TABLE 3. (revised)

WATER BALANCE DETERMINATION  
(all values expressed in barrels)

DATE	PRODUCTION	NET EVAPORATION		TOTAL (Accumulative)	
		Pond 1	Pond 2	Pond 1	Pond 2
MAR	---	-1,150	---	23,500	---
APR	6,000	2,500	3,350	21,000	2,650
MAY	12,400	5,650	7,600	15,350	7,450
JUN	12,000	6,450	7,150	8,900	10,300
JUL	12,400	6,150	9,150	2,750	13,550
AUG	12,400	4,600	7,300	0	18,650
SEP	12,000	---	5,900	0	24,750
OCT	12,400	---	2,250	0	34,900
NOV	12,000	---	-1,200	0	48,100
DEC	12,400	---	- 850	0	61,350
JAN	12,400	---	-1,100	0	74,850
FEB	11,600	---	-1,250	0	87,700
MAR	12,400	-1,000	-1,900	13,400	89,600
APR	6,000	2,300	4,150	17,100	85,450
TOTAL	146,400	25,500	42,550	17,100	85,450

Pond 1: Existing Pond  
Pond 2: Proposed Pond

1) Monthly net pond evaporation  
was estimated using the  
previous months level  
(or surface area).



# FIGURE 3 - STORAGE CURVE ( REVISED )

